PROGRAM TITLE: PROGRAM DISPLAY

PROGRAM CLASSIFICATION:

AUTHORS: Douglas Adams
                                  R. Doyle

PURPOSE: To provide a means of rapidly observing
                                  a set of commands sequentially located
                                  in memory.

DATE: 28 November 1962

Published by

RECOMP Users' Library

at

AUTONETICS INDUSTRIAL PRODUCTS

A DIVISION OF NORTH AMERICAN AVIATION, INC.

3400 East 70th Street, Long Beach 5, California

PROGRAM TITLE: PROGRAM DISPLAY

- -

PURPOSE

To provide a means of rapidly observing a set of commands sequentially
located in memory.

DESCRIPTION

The program makes use of the Start One, Two, and Three Buttons. The user
enters the initial location to be viewed. Start One initiates the display.
Start Three steps ahead in sequence, Start Two steps backwards. In addition,
the program "remembers" the last location displayed. This location may be
re-displayed at any subsequent time by depressing Start Two. In all cases,
after each display, the computer halts with the location counter set to the
location being displayed.

The display will also be initiated by a transfer to the origin (location
0000.0) either by an intentional transfer instruction or an attempt to
execute a negative command. In this case, the location in which the trans-
fer or negative command occurred will be displayed and the computer will
halt at that location. The previous contents of the accumulator will be
found in location 0022.0. This feature facilitates finding unintentional
negative commands during checkout of a new program. Furthermore, a transfer
to 0000.0 can be used, e.g., in subroutine error returns, to provide a diag-
nostic halt.

USAGE

Enter the initial location to be displayed, i.e., "L", four digits and zero.
(It is immaterial whether the Enter key is depressed or not). Depress Start
One. The contents of the specified location will be displayed in command
format and the computer will halt with the location counter set to that loca-
tion. After this initiation, the next location may be displayed by depressing
Start Three; the preceding location may be displayed (ordinarily) by depress-
ing Start Two. In any event the location counter will be set to the location
being displayed. Thus, Start Three steps ahead through the program, Start Two
steps backwards.

Start Two has a dual function. If, following a display, the contents of the
accumulator are undisturbed, Start Two will display the location prior to that
last displayed as described above. If, however, the contents of the accumu-
lator are altered in any way, Start Two causes a re-display of the location
last displayed. (Any entry of the keyboard will, in general, alter the contents
of the accumulator).

PROGRAM TITLE: PROGRAM DISPLAY

- -

This latter feature has the following utility. Ordinarily, the display
routine is used to verify that a portion of the users' program has been
entered correctly. If an error is discovered, the location counter will
be set at the location of the erroneous command, and the corrected command
can be entered immediately. This, of course, alters the accumulator con-
tents, and depressing Start Two will display the same location, i.e., the
location of the command just entered. Thereupon, verification of the
users' program can be continued in sequence.

Furthermore, the location last displayed is retained by the display program.
Thus, following subsequent entry, computation, etc., the location counter
may be quickly set to this location by simply depressing Start Two.

PROGRAM DISPLAY & MIXED NUMBER INPUT
0000 - 0027

0000.0
```
+ SAX 0022.0    + ARS 0000.0
+ EXT 0017.0    + TRA 0013.0
+ TRA 0010.0    + ARS 0000.0
+ CLA 0016.0    + TRA 0012.1
+ TRA 0006.1    + FST 0000.0
+ CLA 0004.0    + ADD 0023.0
+ TOV 0006.1    + STA 0004.1
+ DIS 0004.0    + HTR 0021.0
```

0010.0
```
+ SUB 0014.0    + TOV 0014.1
+ TZE 0012.0    + TRA 0014.1
+ CLS 0016.0    + ADD 0014.0
+ STA 0014.1    + EXT 0017.0
+ STA 0015.1    + DIS 0004.0
+ CLA 0014.0    + HTR 0004.0
+ CLA 0000.0    - CLA 0001.0
+ CLA 0000.0    - CLA 7777.0
```

0020.0
```
+ CLA 0000.0    - CLA 0023.1
- CLA 0000.0    - CLA 0002.0
+ STA 0015.1    + DIS 2117.0
+ FCA 0020.0    + XAR 0002.0
+ FNM 0000.0    + FST 7760.0
+ FCA 0026.0    + CLA 0022.0
+ FAD 7760.0    + TRA 0004.1
+ CLA 0000.0    - CLA 0000.0
```